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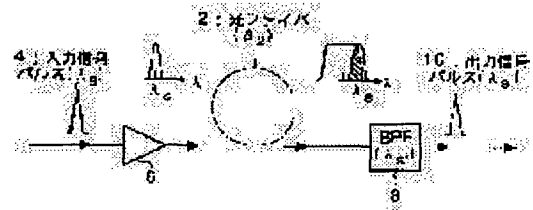
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## (54) METHOD, DEVICE AND SYSTEM FOR PROCESSING OPTICAL SIGNAL

## (57)Abstract:

**PROBLEM TO BE SOLVED:** To provide a processing method for an optical signal suitable for the WDM (wavelength division multiplex) that is independent of a bit rate of an optical signal and a pulse shape or the like with respect to a method, a device and a system for processing an optical signal as a major task.

**SOLUTION:** This invention provides the method for processing an optical signal. When an optical signal is received by an optical waveguide structure providing a nonlinear effect, the nonlinear effect causes chirping to the optical signal. By supplying an output optical signal outputted from the optical waveguide structure to an optical band pass filter, components other than a component with small chirping are extracted. The optical band pass filter has a pass band including wavelengths different from the wavelength of the optical signal. By extracting components other than the component with small chirping intensity fluctuations and accumulated noises are eliminated from the top part and/or the low power part of pulses.



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